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09/821,347	03/29/2001	James P. Kardach	P10783	3768

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EXAMINER

SHAH, NILESH R

ART UNIT PAPER NUMBER

2195

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/821,347

Applicant(s)

KARDACH, JAMES P.

Examiner

Nilesh Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-21 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-21 are presented for examination.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (6,366,622) (hereinafter Brown) and further in view of Bollella (6,466,962).
4. As per claim 1, Brown teaches a mobile, uniprocessor computer system comprising: a high-level baseband controller to operate a radio module in accordance with a wireless communication protocol (col. 8 lines 22-35; col. 22 lines 9-21; col. 25 lines 42-67); wherein the first portion comprises a real-time event circuit to initiate execution of a real-time event handler (col. 3 lines 40-55; col. 14 lines 19-40; col. 22 lines 9-21; col. 25 lines 42-67).

5. Brown does not specifically teach the use of a processor having different areas for real time and non real time events.

Bollella teaches a primary host processor coupled to the high-level baseband controller, the processor having a first portion to process real-time events received from the controller and associated with the wireless communication protocol, and having a second portion to process non real-time events (element 12, fig 1, fig. 5; fig.12; col. 5 lines 5-30; col. 18 lines 25-35, col. 3 lines 3-10).

6. It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Bollella and Brown because Bollella's events are spilt into real time and non real time event thus would improve Brown's wireless system by allowing real time events to be processed first.

7. As per claim 2, Bollella teaches a computer system wherein the first portion of the processor includes a non-symmetric processing core to run a first operating system, the second portion of the processor to run a second operating system, and the first and second portions of the processor to share a level-2 cache (col. 8 lines 53-65,col. 18 lines 25-35).

8. As per claim 3, Bollella teaches a computer system wherein the real-time event circuit is to halt a non real-time process (col. 6 lines 5-26, col. 5 lines 52-66, col. 9 lines 20-30).

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9. As per claim 4, Bollella teaches a computer system wherein the first portion of the processor further includes a timer to trigger the real-time event circuit to initiate the execution of the real-time event handler (col. 5 lines 52-66, col. 9 lines 20-30).
10. As per claim 5, Bollella teaches a computer system wherein the processor includes an externally accessible event pin to trigger the real-time event circuit to initiate the execution of the real-time event handler (col. 6 lines 5-26, col. 5 lines 52-66, col. 9 lines 20-30).
11. As per claim 6, Bollella teaches a computer system wherein the non real-time events are associated with running a Windows operating system (col. 4 lines 10-13, col. 5 lines 14-17).
12. As per claim 7, Brown teaches a computer system further comprising a radio module including buffered input-output ports coupled to the high-level baseband controller, a low-level baseband controller, and a transceiver to enable wireless communication in accordance with the wireless communication protocol, the module meeting Limited Modular Approval by the Federal Communications Commission (col. 8 lines 22-35, col. 21 lines 10-23, col. 22 lines 1-21, col. 21 lines 43-50).

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13. As per claim 8, Brown teaches a computer system wherein the low-level baseband controller includes a baseband portion associated with a link management protocol (col. 20 lines 43-57 col. 6 lines 3-7).
14. As per claim 9, Brown teaches a computer system further comprising a flexible cable coupled to the high-level baseband controller at a first end and coupled to the ports of the radio module at a second end (col. 22 lines 23-35, col. 21 lines 43-50, col. 21 lines 10-24).
15. As per claim 10, Brown teaches a computer system further comprising a hinged lid into which the radio module is affixed, the flexible cable extending through a hinge between the radio module and the high-level baseband controller (col. 22 lines 23-35, col. 21 lines 43-50, col. 21 lines 10-24).
16. As per claim 11, Brown teaches a computer system further comprising a chipset, the high-level baseband controller being incorporated into the chipset (col. 21 lines 5-24, col. 12 lines 46-60).
17. As per claim 12, Brown teaches a computer system further comprising a keyboard controller, the high-level baseband controller being incorporated into the keyboard controller (col. 3 lines 35-50, col. 21 lines 10-22).

18. As per claim 13, Brown teaches a computer system wherein the wireless communication protocol is selected from a group consisting of Bluetooth, SWAP, and IEEE 802.11 (col. 29-40, col. 3 lines 35-50).

19. As per claim 14, Brown teaches a method comprising:

receiving a real time event by a transceiver of the computer system from an external device the event associated with a wireless communication protocol (col. 8 lines 22-35, col. 21 lines 10-24);

processing the event in real-time using real-time event handler initiated by a real0time circuit within the processor, the processing of the event allowing to maintain the wireless communication protocol is maintained and a high-level portion of baseband processing associated with the wireless communication protocol is done by the processor independent of the operating system (col. 3 lines 40-55; col. 14 lines 19-40; col. 8 lines 22-35, col. 21 lines 10-24).

Bollella teaches executing a process on a primary host processor of a computer system (col. 18 lines 25-35, col. 3 lines 3-10); and

the process being associated with a non real-time operating system, forwarding the event to the processor(col. 18 lines 25-35, col. 3 lines 3-10).

20. As per claim 15, Brown teaches a method wherein a low-level portion of the baseband processing associated with the wireless communication protocol is done by a radio module independent of the processor (col.20 lines 42-55, col. 22 lines 1-35).

21. As per claim 16, Brown teaches a method wherein the wireless communication protocol is a Bluetooth protocol, and the low-level portion of the baseband processing is in accordance with the Bluetooth link management protocol (col. 4 lines 57-67, col. 6 lines 3-7).
22. As per claim 17, Bollella teaches a method wherein processing the event in real-time includes halting the process, saving a processor state to a reserved memory space, executing a real-time event handler, returning the processor state, and continuing execution of the process(col. 6 lines 5-26, col. 5 lines 52-66, col. 9 lines 20-30).
23. As per claim 18, Bollella teaches a method wherein processing the event in real-time includes processing the event in a first portion of the processor under a first operating system while continuing execution of the process in a second portion of the processor under a second operating system (col. 18 lines 25-35, col. 3 lines 3-10).
24. Claims 19 and 20 are rejected based on the same rejection as claim 14 above.
25. As per claim 20, Bollella teaches a machine-accessible medium including machine-accessible instructions that, when executed by a computer system, cause the computer system to perform the method (col. 2 lines 50-65, col. 8 lines 20-29).



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26. As per claim 21, Bollella teaches a medium further comprising machine-accessible instructions that, when executed by the computer system (col. 2 lines 50-65, col. 8 lines 20-29).

***Response to Arguments***

27. Applicant's arguments filed 8/17/2005 have been fully considered but they are not persuasive.
28. Applicant states a) Bollella does not teach or suggest a processor; b) Bollella and Brown do not teach the use of real-time and non real-time events.
29. Examiner respectfully disagrees with applicant's remarks.

As to point a) Bollella does teach a processor (element 12, fig 1, fig. 5; fig.12; col. 5 lines 5-30). As per point b) Brown teaches real-time event handler (col. 3 lines 40-55; col. 14 lines 19-40; col. 8 lines 22-35, col. 21 lines 10-24) and Bollella teaches the process being associated with a non real-time operating system (col. 18 lines 25-35, col. 3 lines 3-10).

***Conclusion***

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nilesh Shah whose telephone number is (571)272-3771. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nilesh Shah  
Examiner  
Art Unit 2195

NS  
October 25, 2005

  
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